

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Sophie BELAVEN et al  
Serial No.: To Be Assigned  
Filed: December , 2000  
(Concurrently Herewith)  
For: METHOD OF GENERATING A GRID ON A  
HETEROGENOUS FORMATION CROSSED BY  
ONE OR MORE GEOMETRIC DISCONTINUITIES  
IN ORDER TO CARRY OUT SIMULATIONS  
Art Unit: To Be Assigned  
Examiner:

**PRELIMINARY AMENDMENT**

Assistant Commissioner  
for Patents  
Washington, D. C. 20231

December 4 , 2000

Sir:

Prior to examination of the above-identified application,  
please amend the claims as follows:

**IN THE CLAIMS:**

Claim 3, line 1, delete "or 2".

Claim 4, line 1, change "any one of the preceding  
claims," to read --claim 1,--.

Claim 6, line 1, delete "any one of the previous claims,"  
and insert --claim 1--.

09727452.120400

Please insert new claims 7-14 as follows:

09727452.120400

7. A method as claimed in claim 2, applied to a heterogeneous medium where at least one geometric discontinuity is a fracture or a fault crossing the heterogeneous medium, characterized in that a first structured grid and a second structured grid are formed in parts of the heterogeneous medium, on either side of each fracture, by respecting the discontinuities thereof, each cavity delimited to include a non-structured transition grid being formed by deactivating grid cells of the first and second structured grids, on either side of each fracture.

8. A method as claimed in claim 2, characterized in that it includes imposing to polygonal edges forming the walls of each cavity to the edges of a Delaunay type triangulation.

9. A method as claimed in claim 3, characterized in that it includes imposing to polygonal edges forming the walls of each cavity to the edges of a Delaunay type triangulation.

10. A method as claimed in claim 2, characterized in that each first structured grid is a non-regular grid, of CPG type.

11. A method as claimed in claim 3, characterized in that each first structured grid is a non-regular grid, of CPG type.

12. A method as claimed in claim 4, characterized in that each first structured grid is a non-regular grid, of CPG type.

13. A method as claimed in claim 5, characterized in that each first structured grid is a non-regular grid, of CPG type.

14. A method as claimed in claim 6, characterized in that each first structured grid is a non-regular grid, of CPG type.--

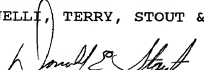
**REMARKS**

The claims have been amended to remove the multiple dependent claims before filing fee calculation and to improve their form for examination.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (612.39353X00) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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Attachment  
DES:dlh